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Bibliography

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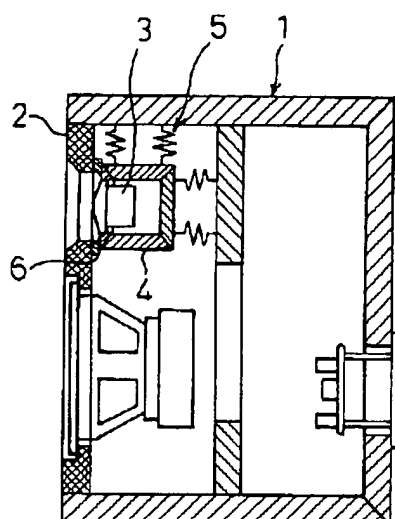
Summary

(57) [Abstract]

[Objects of the Invention] It aims at offering the loudspeaker cabinet which unnecessary sound does not generate from the loudspeaker enclosure and a baffle plate.

[Elements of the Invention] While attaching a loudspeaker unit 3 in the supporter material 4 and making a baffle plate 2 support this supporter material 4 through a viscoelastic body 6, it is characterized by making the loudspeaker enclosure 1 support through a spring 5.

[Translation done.]



- 1---スピーカエンクロージャ
- 2---バッフル板
- 3---スピーカユニット
- 4---内側キャビネット（支持部材）
- 5---支持バネ
- 6---粘弾性体

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CLAIMS

[Claim(s)]

[Claim 1] The loudspeaker cabinet characterized by making the loudspeaker enclosure support through a spring while attaching a loudspeaker unit in supporter material and making a baffle plate support this supporter material through a viscoelastic body.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the loudspeaker cabinet for hi-fi.

[0002]

[Description of the Prior Art] In recent years, digitization of the music source progresses and efforts to reproduce the digitized music source more faithfully are performed also in the loudspeaker system in connection with it. A silence cabinet which made as small as possible unnecessary vibration generated to each part of a loudspeaker cabinet as a reaction of the acoustic radiation of a loudspeaker unit also with the loudspeaker cabinet in it is desired.

[0003] Next, the conventional example of a loudspeaker cabinet is explained based on drawing 2.

[0004] The loudspeaker cabinet of the conventional example has the loudspeaker enclosure 10 formed in box-like, the baffle plate 11 prepared in this loudspeaker enclosure 10, the loudspeaker unit 12 attached in this baffle plate 11, the acoustic material 13 prepared in the outside front face of a baffle plate 11, the acoustic material 14 prepared in the interior of the loudspeaker enclosure 10, and the network 15 established in the loudspeaker enclosure 10.

[0005] In the loudspeaker cabinet of the conventional example of the above-mentioned composition, at the time of the acoustic radiation of a loudspeaker unit 12, the mechanical oscillation of loudspeaker-unit 12 self by the reaction of acoustic radiation was absorbed in the operation of a baffle plate 11, acoustic material 13 absorbed the radiation sound by vibration of the baffle plate 11 generated at this time, and radiation of unnecessary sound is prevented.

[0006]

[Problem(s) to be Solved by the Invention] However, when unnecessary sound generating of the loudspeaker cabinet of the above-mentioned conventional example is strictly considered

according to the advanced demand to the tone quality of a music source digitization time, there is the following trouble.

[0007] That is, with the composition of the above-mentioned conventional example, since the loudspeaker unit 12 is directly connected to the baffle plate 11 with the screw etc. at **, the mechanical oscillation of loudspeaker-unit 12 self generated according to the reaction of acoustic radiation at the time of the acoustic radiation of a loudspeaker unit 12 gets across to a baffle plate 11 directly. Although this transmitted mechanical oscillation is decreased in the elastic operation which a baffle plate 11 has, it cannot avoid that a baffle plate 11 vibrates mechanically, but the mechanical oscillation of this baffle plate 11 also vibrates the loudspeaker enclosure 10, this vibration generates the unnecessary sound from a baffle plate 11 and the loudspeaker enclosure 10, and it has the trouble of reducing the tone quality of a loudspeaker. Furthermore, although there is an effect of absorbing the unnecessary sound emitted by the mechanical oscillation of a baffle plate 11 from a baffle plate 11, and preventing the unnecessary sound radiation by this root in the acoustic material 13 prepared in the outside front face of a baffle plate 11 The mechanical oscillation transmitted from a loudspeaker unit 12 to the acoustic material 13 prepared in the outside front face of a baffle plate 11 through the baffle plate 11 exists, acoustic-material 13 self vibrates by this mechanical oscillation, and there is a trouble that unnecessary sound occurs from acoustic-material 13 self.

[0008] this invention solves the above-mentioned trouble and makes it the technical problem to offer the loudspeaker cabinet which unnecessary sound does not generate from the loudspeaker enclosure and a baffle plate.

[0009]

[Means for Solving the Problem] The loudspeaker cabinet of this invention is characterized by making the loudspeaker enclosure support through a spring while it attaches a loudspeaker unit in supporter material and makes a baffle plate support this supporter material through a viscoelastic body, in order to solve the above-mentioned technical problem.

[0010]

[Function] The loudspeaker cabinet of this invention attaches a loudspeaker unit in supporter material, and while making a baffle plate support this supporter material through a viscoelastic body, the loudspeaker enclosure is made to support it through a spring. Namely, since a loudspeaker unit and supporter material are supported by ** with the viscoelasticity of a viscoelastic body, and the elasticity of a spring, although the vibrational energy generated in a loudspeaker unit at the time of the acoustic radiation of a loudspeaker unit vibrates a loudspeaker unit and supporter material The vibrational energy which it balances with the inertia by the mass of a loudspeaker unit and supporter material, and most is consumed, declines, and gets across to a baffle plate through a viscoelastic body further, Decrease with

viscoelasticity and elasticity and it will become very feeble to the vibrational energy which gets across to the loudspeaker enclosure through a spring. The vibrational energy which gets across to a baffle plate and the loudspeaker enclosure becomes the very feeble thing of the grade which does not generate unnecessary sound, and it can prevent the unnecessary sound emitted from the loudspeaker enclosure and a baffle plate so that an advanced tone-quality demand of a music source digitization time may be suited.

[0011]

[Example] One example of this invention is explained based on drawing 1.

[0012] Drawing 1 is the cross section of one example of the loudspeaker cabinet of this invention.

[0013] In drawing 1, the loudspeaker cabinet of this example has the loudspeaker enclosure 1 formed in the core box, the baffle plate 2 prepared in the front face of the loudspeaker enclosure 1, and the inside cabinet 4 (supporter material) which attached the loudspeaker unit 3, and this inside cabinet 4 (supporter material) is supported by the loudspeaker enclosure 1 through the spring 5 while it is supported by the baffle plate 2 through a viscoelastic body 6.

[0014] In the loudspeaker cabinet of this example constituted as mentioned above, a loudspeaker unit 3 vibrates according to the reaction of vibration of the voice coil in a loudspeaker unit 3 (not shown) at the time of the acoustic radiation of a loudspeaker unit 3, and the inside cabinet 4 (supporter material) which attached the loudspeaker unit 3 by this vibration is excited. In this case, however, the inside cabinet 4 (supporter material) Since it is supported by the loudspeaker enclosure 1 through the support spring 5 while being supported by the baffle plate 2 through a viscoelastic body 6 Vibration by the reaction of the acoustic radiation of the voice coil in a loudspeaker unit 3 (not shown) minds the inside cabinet 4 (supporter material), a viscoelastic body 6, and the support spring 5. the case where it gets across to a baffle plate 2 and the loudspeaker enclosure 1 -- first -- an inertia operation of the mass of the inside cabinet 4 (supporter material) -- the vibrational energy -- decreasing -- {-- an effect is so large that the mass of the inside cabinet 4 (supporter material) is large in this case Since it decreases in} and also a viscoelasticity operation of a viscoelastic body 6, and an elastic operation of the support spring 5, the strength of the mass of {, in this case the inside cabinet 4 (supporter material) and the viscoelasticity of a viscoelastic body 6 and the strength of the elasticity of the support spring 5 balance. In the state where the inside cabinet 4 (supporter material) can be stabilized and supported in a predetermined position, an effect is so large that the mass of a loudspeaker unit 3 and the inside cabinet 4 (supporter material) is so large that the strength of a viscoelastic body 6 and the support spring 5 is small. The energy of vibration which reaches even}, a baffle plate 2, and the loudspeaker enclosure 1 becomes very small, still more generally, since the mass of a baffle plate 2 and the loudspeaker enclosure 1 is larger than the mass of a loudspeaker unit 3 and the inside cabinet 4 (supporter

material), vibration of a baffle plate 2 and the loudspeaker enclosure 1 becomes the very feeble thing of the grade which does not generate unnecessary sound, and generating of the unnecessary sound from a baffle plate 2 and the loudspeaker enclosure 1 of it is lost.

[0015] On the other hand, the unnecessary sound emitted from the front face of the support spring 5 and a viscoelastic body 6 by vibration is slight, and since this slight unnecessary radiation sound is also interrupted by a baffle plate 2 and the loudspeaker enclosure 1 and is not emitted outside, the tone quality of the loudspeaker cabinet of this example becomes very good.

[0016] In addition, not only the above-mentioned example but various modes are possible for the loudspeaker cabinet of this invention. For example, although the loudspeaker unit 3 is attached in the inside cabinet 4 formed in the core box in this example, the supporter material designed by not only a core box but arbitrary configurations can be used.

[0017]

[Effect of the Invention] The loudspeaker cabinet of this invention by making the loudspeaker enclosure support through a spring, while attaching a loudspeaker unit in supporter material and making a baffle plate support this supporter material through a viscoelastic body The vibrational energy transmitted from an unnecessary vibration generated in a loudspeaker unit by the reaction of the sound production of a loudspeaker unit It decreases in an inertia operation of the mass of a loudspeaker unit and supporter material. first, further Since it has the synergistic effect of making it decrease in an elastic operation of a support spring and a viscoelasticity operation of a viscoelastic body and the loudspeaker enclosure and an unnecessary vibration which gets across to a baffle plate become very small Unnecessary sound does not occur from the loudspeaker enclosure and a baffle plate, but the effect of obtaining the tone quality which suited the advanced demand to the tone quality of a music source digitization time is done so.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the cross section of one example of this invention.

[Drawing 2] It is the cross section of the conventional example.

[Description of Notations]

1 Loudspeaker Enclosure

2 Baffle Plate

3 Loudspeaker Unit

4 Inside Cabinet (Supporter Material)

5 Support Spring

6 Viscoelastic Body

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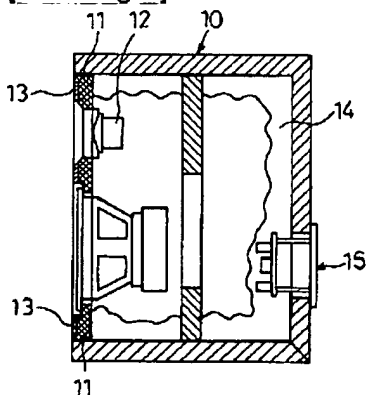
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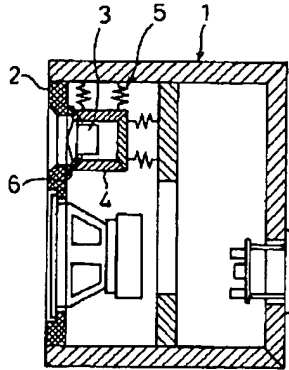
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DRAWINGS

[Drawing 2]



[Drawing 1]



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- 4...内側キャビネット（支持部材）
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- 6...粘弾性体

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